

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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TITLE 8: Chapter 4, Subchapter 7, Article 98, Section 5006 and New Section 5006.1
of the General Industry Safety Orders

Crane Operator Qualifications and Certification

There are no modifications to the information contained in the Initial Statement of Reasons except for the following substantive and sufficiently related modifications that are the result of public comments and/or Board staff evaluation.

Section 5006.1(a) Qualifications.

New subsection (a)(1) requires each employee who intends to operate a crane to pass a physical examination. A modification is proposed to clarify that the employee is to pass a physical examination given by a physician which at a minimum includes the examination criteria specified in the ASME B30.5-2000 standard, Chapter 5-3.1.2(a)(1-5, 7 and 8) or the US Department of Transportation (US DOT) physical examination requirements contained in 49 CFR 391.41 through Section 391.49. The proposed modifications are necessary to clearly indicate to the employer who is to conduct the exam and what the physical exam is to consist of to ensure the employee is physically qualified to operate a mobile or tower crane safely.

Subsection (a)(1)(D) requires crane operators to possess crane safety knowledge for the type of crane they intend to operate and references specific chapters containing information on the safe operation of various ASME B30 standards for mobile, locomotive, portal, pedestal and tower cranes. A modification is proposed to include the information in Chapter 3-3 of the ASME B30.3-1996 standard for construction tower cranes. This modification is necessary to ensure that employees who intend to operate construction tower cranes are knowledgeable in the safe operation of such cranes to prevent a serious, potentially catastrophic crane accident.

A second modification is proposed for paragraph (D) which references Chapters 4-0 through 4-2 of the of the ASME B30.4-1996 standard for portal, tower and pedestal cranes, to specify Chapters 4-0 through 4-3. This modification is necessary to ensure that all of the relevant crane information (safe operating practices) contained in Chapter 4-3 necessary for the operator to operate the crane safely is addressed as required knowledge.

Subsection (d) addresses the issue of re-certification of crane operators and specifies that they shall re-certify every 5 years, allows crane operators to waive the "hands-on" or practical exam provided that can document at least 1000 hours of experience operating a crane covered by Section 5006.1, etc.

A modification is proposed to add clarification to the second sentence of subsection (d) by modifying the existing language to read: "... (1000) hours of documented experience operating the specific type of crane for which re-certification is sought as covered by this section..."

The proposed modification is necessary to clearly indicate to the employer that in order to qualify for a waiver of the practical exam the 1000 hours of previous documented experience must be in the operation of the type of crane the operator seeks to re-certify in.

Exceptions to Section 5006.1

The proposal contains three exceptions (Nos. 1, 2 and 3) which exclude mobile cranes having a boom length less than 25 feet or a maximum rated lifting capacity of less than 15,000 pounds, electric line trucks (derrick trucks) as defined in Section 2700 of the High Voltage Electrical Safety Orders (HVESO) and marine terminal operations regulated by Article 14 of the General Industry Safety Orders (GISO). A modification is proposed to Exception No. 1 to change the term maximum rated lifting capacity to *maximum rated load capacity* for clarity and to be consistent with existing Title 8 crane terminology for "rated load" as contained in Section 4885 of the GISO. A second modification is proposed to delete the parenthetical term "derrick truck" from Exception No. 2. The proposed deletion is necessary to clearly indicate to the employer that electric line trucks as defined in the HVESO are intended to be exempt from the proposed requirements of Section 5006.1, not to be confused with another type of lifting device known as a derrick. An additional modification is proposed to Exception No. 2 to delete the phrase "... used by public utilities..." The proposed modification is necessary to ensure that private as well as public operators of electric line trucks are excluded from the provisions of Section 5006.1.

SUMMARY AND RESPONSE TO ORAL AND WRITTEN COMMENTS

I. Written Comments

Mr. Brad Closson, Executive Vice President, North American Crane Bureau
by letter dated (facsimile transmission dated October 28, 2002) October 28, 2002.

Comment:

Mr. Closson's comment letter contained a number of points (Nos. 1-6) beginning with a statement that he has participated as a member of the advisory committee group which assisted staff in preparing the proposal and further indicated that he believes it is necessary to establish operator qualification requirements and that the core requirements of Sections 5006 and 5006.1 successfully accomplish this with the exception of the 1000 hour exemption contained in Section 5006(d). Mr. Closson also stated that he does not believe employers should be held responsible for certification for which they are precluded from developing and that will not be directly relevant to the equipment the operator is using. In making his first point, Mr. Closson stated that he does not understand how the state has maintained that it "cannot mandate compliance with

unwritten requirements,” but the state can now mandate compliance with requirements that will be developed in June of 2005 by four non-crane related groups as specified in Section 5006.1(a)(3) and 5006.1(c) and identified as the Joint Committee of the American Educational Research Association, et. Seq.

Response:

In response to his introductory statement and points identified as Nos. 1-3 in Mr. Closson’s letter, the Board staff notes and appreciates Mr. Closson’s participation in the May 23, and 24, 2000 Crane Operator Qualifications subcommittee and subsequent subcommittee deliberations which led to the proposal. According to the proposal, the employer has a choice: become an accredited certifying entity and develop a certification program (which means the employer will exercise complete control over the certification program via test development and conformance to accreditation standards) based on the requirements set forth in Section 5006.1, or send the employee to an accredited certifying entity of the employer’s choice. In either case the crane operator’s certification, whether issued by an employer certifying entity or an outside certifying entity, must include testing, which at a minimum addresses the test criteria specified in Section 5006.1(a)(3) and (4). Consequently, the Board staff believes the proposal provides the employer with sufficient choice and control over the certification process. It should also be noted that as currently proposed, new Section 5006.1 requires employers to ensure that employees who operate mobile cranes (as specified in the proposal) and tower cranes have taken the requisite tests and become certified in the operation of the specific mobile or tower crane they intend to operate. It is clear in the proposed language that certification is to be relevant to the specific type of crane the employee will operate.

With regard to the mandating of compliance with the accreditation requirements specified in Section 5006.1(a)(3) and (c), the Standards for Educational and Psychological Testing (the Standards) published by the American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education (comprising the “Joint Committee”) are unlike national consensus standards to the extent that notwithstanding editorial revisions, they have since their inception in 1954 remained fairly static (there have been only four revised editions in nearly 50 years) in overall content. The standards themselves represent established psychometric methods presented as more of a textbook on the subject rather than a periodically refreshed national consensus standard. The 1999 copyrighted edition is the most current edition of this reference book and was considered during the advisory committee and subcommittee deliberations. Board staff has proposed to modify the proposal to specify the 1999 copyright to clearly indicate to the employer which copyrighted edition of the Standards is being referred to in the proposed language. Board staff believes that although the proposed new Section 5006.1 certification requirements do not become effective until 2005, it is unlikely that given the copyright history of the Standards, there will be any significant/substantive changes to this document. Staff wishes to emphasize that under the terms of the proposed language, only those employers who elect to become their own certifying entity will need to consult the Standards in order to develop their testing

procedures/protocols to comply with the proposal. Based on prior experience with rulemaking packages the Office of Administrative Law has precluded Board staff from using language such as "...the employer shall comply with the most current document in effect at the time the regulation became effective..." because of clarity issues. Consequently, other than the proposed inclusion of the 1999 copyright date for clarity, the Board believes no other modification of the proposed language with regard to this specific issue is necessary.

Comment:

In point No. 4, Mr. Closson states that the national consensus standard references are not complete and he suggested that Board staff include a reference to the American Society of Mechanical Engineers (ASME) B30.3, Construction Tower Crane standard to ensure that the proposal covers all types of tower cranes used by the construction industry in California and the ASME B30.22, Articulating Boom Crane standard used in numerous settings. In addition, Mr. Closson notes that the ASME B30.4 reference does not require knowledge of safe operating practices that is found in Section 4-3 of the standard.

Response:

The Board agrees with Mr. Closson to the extent that for the sake of completeness the proposal in Section 5006.1(a)(3)(D) should be modified to include a reference to the most recent edition of the ASME B30.3 Construction Tower Crane standard (1996) and that the B30.4 reference to Sections 4-0 through 4-2 should be modified to include Section 4-3. Therefore, Board staff proposes to modify the proposal to include a reference to the ASME B30.3 Construction Tower Crane Standard and to expand the B30.4 reference to include Sections 4-0 through 4-3. With regard to Mr. Closson's other comment regarding the ASME B30.22 standard, Board staff notes that B30.22 addresses the articulating rather than the non-articulating boom type mobile crane equipment and that a portion of the equipment addressed by the B30.22 standard is not mobile. The Board believes such equipment may merit consideration by an advisory committee and inclusion into Section 5006.1 qualification/certification requirements at a later date. To include ASME B30.22 at this time constitutes an unacceptable level of deviation from the intent of this rulemaking as confirmed by the consensus of the crane subcommittee members to address all types of tower cranes and mobile cranes above a specified size. Consequently, the Board believes it is unnecessary at this time to include a reference to the ASME B30.22 standard.

Comment:

Mr. Closson stated in point No. 5 that Section 5006.1(d) appears to ignore the uniqueness and potential hazards of the various makes, models, and work site configurations that subsection (a) appears to recognize. Mr. Closson states that Section 5006.1(d) allows three hours per week “crane operation” over five years on any type of crane as a condition of re-certification without having to take a practical examination. Mr. Closson inquired as to what type of documentation the State is going to accept and who is responsible for its accuracy and maintenance. Mr. Closson notes that as defined in the proposal the certification is the employee’s not the employer’s and only the “authorization” will be the employers [responsibility].

Response:

Section 5006.1(d) permits 1000 hours of documented, hands-on, in the seat, experience in the operation of mobile cranes as specified in Exception No. 1 to Section 5006.1, or tower cranes to qualify the operator to become re-certified without having to take the practical exam provided the operator passes a written test and meets the substance abuse and physical qualifications. The intent of the documentation requirement is to provide the employer with a means of verifying/substantiating the crane operator’s claim that the operator has completed the minimum 1000 hours of hands on experience for all tower cranes and mobile cranes as specified in Exception No. 1. For added clarity, the Board proposes to modify subsection (d) to clarify that then 1000 hours of previous experience must be in the operation of the type of mobile crane or tower crane re-certification is sought. The 1000 hours is a number believed by the advisory committee to provide the operator with sufficient time to develop and prove his/her skills at operating the crane. This was based on testimony from a member of the committee representing a nationally recognized and NCCA accredited certifying entity who determined through experience that 1000 hours of crane operation is sufficient to allow operators to waive the practical exam. Typically, an accredited certifying entity such as NCCCO will require operators to document their 1000 hours by requiring the operator to provide a sworn affidavit stating under penalty of perjury that they have 1000 hours of crane operation experience. The affidavit typically will identify the employee, the places of employment where the hands-on experience took place, including the name, address and telephone number of each employer, and evidence that the operator has met the 1000-hour requirement operating a tower or mobile crane covered by Section 5006.1. Many cranes, especially the newer models have sophisticated displays which can provide accurate information (time indices) helpful to operators who track and log their time operating the unit. Staff has also learned that certifying entities such as NCCCO will conduct random, periodic audits of the affidavits from operators who wish to waive the hands-on exam, to ensure accuracy.

Comment:

In his sixth point, Mr. Closson states that Exemption No. 1 appears to allow any sized crane that is configured for loads of 7.5 tons or less to be operated by an unqualified operator. Mr. Closson also suggested changing the phrase "...maximum rated lifting capacity..." to the term "rated load" to be consistent with the existing Section 4885 defined term for "rated load." In closing, Mr. Closson also stated the need for safe operation of cranes by employees, promulgating regulations that clearly indicate what is necessary to improve safety on the job, and avoid useless bureaucracies that do nothing to improve safety on the job. Mr. Closson stated that as written, the proposal appears to imply that crane operators cannot be trusted and suggested simply informing the public as to what is necessary to enhance safety and leave the specifics to the employer as they are accountable for failures.

Response:

Board staff agrees with Mr. Closson with regard to the terminology in Exception No.1 and proposes to modify the proposal to read "...maximum rated load capacity..." rather than "maximum rated lifting capacity" to be consistent with existing Title 8 crane terminology. This will address Mr. Closson's implied concern that a crane with a maximum rated load capacity of 25 tons could be reconfigured by the crane owner/employer to lift only 7.5 tons and circumvent the regulation. Moreover, operators of mobile cranes with a lifting capacity of less than 15,000 pounds are still subject to the existing qualification requirements contained in Section 5006, which requires employers to utilize operators who are trained in the safe operation of cranes and hoisting apparatus. This regulation only permits trainees to operate such cranes when they are under the direct supervision of a qualified operator.

With regard to Mr. Closson's closing comments, the Board is in general agreement to the extent that the Board believes the proposal will improve the level of crane safety for operations involving employees and mobile and tower cranes as specified and covered by the proposed language. The Board believes this will be accomplished by language that clearly indicates what the employer's responsibilities are in terms of the process of crane operator certification without establishing a new state program and additional bureaucracy. The Board also believes that the consensus proposal is one that is consistent with industry practice and judging from the comments received at the December 12, 2002 Public Hearing is generally supported by both labor and management. The issue of trust between the regulatory agencies and employers statewide does not appear to be at issue; it is understood that this proposal is consistent with the employer's responsibilities under the Cal-OSHA program to provide a safe and healthful workplace for their employees. The Board believes the proposal as modified herein will go far towards ensuring that employers who operate tower cranes and mobile cranes as specified will meet their obligation under the law.

The Board and staff would like to thank Mr. Closson for his willingness to serve on the crane operator qualifications/certification advisory committees and for his valuable contribution of time and expertise in conjunction with the Board's rulemaking process.

Mr. James P. Coenen, Safety Administrator, Bigge Crane and Rigging Co., by letter dated, December 6, 2002.

Comment:

Mr. Coenen suggested clarifying the physical examination requirement by amending Section 5006.1(a)(1) to specifically state that the physical exam must be passed based on criteria consistent with the requirements of the USDOT/FMCSR 49 CFR Part 391, Subpart E, and clarifying the substance abuse testing requirement in 5006.1(a)(2) to reference the substance abuse testing criteria of USDOT/FMCSR 49 CFR Part 40, Subpart B. In support of his suggested modifications, Mr. Coenen stated that the physical exam and substance abuse testing requirements should be clear to the employer as to what constitutes an acceptable physical exam and drug test such as the widely used US DOT exam requirements to avoid individual interpretation of the requirements, which could lead to confusion. In addition, Mr. Coenen suggested modifying the Section 5006.1(a)(2) certification requirement to add language that would void the certificate of competency if the operator were not in possession of documentation verifying that the operator has undergone and passed the physical examination required in subsection (a)(1) of Section 5006.1. Mr. Coenen also suggested a fourth exception be added to the list of proposed exceptions to Section 5006.1 which would exempt mobile cranes covered by Section 5006.1 when they are operated by a qualified mechanic for incidental purposes of maintenance involving routine service diagnosis, repair and testing. With regard to the proposed exception, Mr. Coenen stated that while most crane mechanics are qualified to operate equipment for incidental maintenance purposes they do desire to become certified crane operators. Employers may have to incur significant costs when maintenance is done on their crane if a certified operator is required.

Response:

The Board concurs with Mr. Coenen to the extent that Board staff proposes to modify Section 5006.1(a)(1) to specify that a physical exam is to be conducted that will at a minimum meet the physical exam requirements specified in the ASME B30.5-2000 standard or the US DOT exam requirements contained in 49 CFR Sections 390.41 through 391.49. As for the drug testing requirement in subsection (b)(2), the Board prefers to use the national consensus language specified in the ASME B30.5 standard which was agreed to by the crane operator qualifications/certification subcommittee. With regard to a fourth exemption as proposed by Mr. Coenen, Board staff notes that the proposal requires that only those employees who are to be operators of cranes, not mechanics (also known as oilers in the crane industry) who may be involved in incidental, short term energization of all or part of the crane's systems for the purpose of maintenance, repair, troubleshooting, etc., be certified. In the course of the advisory

committee deliberations it became apparent to staff that the distinction between crane operators and crane mechanics is understood by those in the industry. The proposal applies specifically to crane operators. Therefore, crane mechanics do not require certification, only tower and mobile crane operators (as specified). Adding a specific exemption for mechanics appears to be unnecessary.

The Board thanks Mr. Coenen for his comments and participation in the Board's rulemaking process.

Mr. Graham Brent, Executive Director, National Commission for the Certification of Crane Operators (NCCCO), by letter dated, December 9, 2002.

Comment:

Mr. Brent discussed the formation of NCCCO, services provided, affiliations, and gave a brief description of NCCCO clients. Mr. Brent expressed support for the proposal and emphasized the importance of sound medical examinations, written and practical exams. Mr. Brent also indicated that while California employers are already required to meet generalized crane operator qualifications, some standardized assessment of the ability of the crane operator to operate a crane safely is needed. Mr. Brent further stated that without efforts to assure a valid test protocol efforts to ensure qualified crane operators may be jeopardized through a false sense of security that could be created through the use of non-validated examinations.

Mr. Brent then suggested the proposal be modified to include clarification on what constitutes the nature and extent of the physical examination requirement in Section 5006.1(a)(1). Mr. Brent questioned whether the exam is to be conducted by a licensed medical practitioner and whether or not the exam should meet the physical exam requirements of NCCCO or the US DOT 49 CFR requirements. Mr. Brent's second suggestion is to move up the effective date of the proposal.

Response:

With regard to Mr. Brent's first suggested modification, see Board staff's response to Mr. Coenen's written comment with regard to the issue of clarification of the physical exam requirements. Also a proposed modification to Section 5006.1(a)(1) will require the physical exam to be conducted by a licensed physician. With regard to moving the January 1, 2005 effective date forward, Board staff believes that the current effective date is necessary to afford California employers with sufficient time to comply with the proposed requirements. Also, it is important to give purveyors of certification services adequate time to "ramp up" before the proposed regulation becomes effective. For these reasons the Board believes that modification of the effective date of the proposal is unnecessary.

Mr. Donald C. Russell, Chairman, Sheedy Drayage Company, by letter dated, December 10, 2002.

Mr. Steven B. Spence, President, King Crane Service Inc., by letter dated December 10, 2002.

Mr. Seth Hammond, President, Specialty Crane and Rigging, by letter dated December 11, 2002.

Mr. George M. Bragg, President, Bragg Crane Service, by letter dated December 11, 2002.

Mr. Greg Foster, Vice President, Crane Rental Service, Inc., by letter dated December 12, 2002.

Mr. Selwyn Rabbits, General Manager, Mr. Crane Inc., by letter dated December 12, 2002.

Comment:

The commenters stated that they are in support of the Board staff's proposal and indicated that the proposed regulations will serve to improve the operation of cranes in the construction industry. The proposal recognizes the efforts of industry to ensure that their operators are qualified as well as the efforts of industry to implement crane operator certification programs. All of the commenters indicated that they have certified crane operators working for their companies and have been certifying crane operators for a number of years through a program that would be in full compliance with what is being proposed by staff. The commenters urged the Board to adopt the proposed amendments to Sections 5006 and new Section 5006.1.

Response:

The Board acknowledges the commenters' support for the proposal and thanks them for their participation in the Board's rulemaking process.

Ms. E. Colette Nelson, Executive Vice President, American Subcontractors Association, Inc. (ASA), by letter dated December 10, 2002.

Comment:

Ms. Nelson expressed general support for the intent of Board Staff's proposal, specifically to add a new Section 5006.1 to the General Industry Safety Orders addressing Crane Operator Qualifications and Certification and stated that the proposal agrees with industry standards and practice which are consistent with the ASME B30 crane standards. The ASA believes that two provisions of the proposal are fundamental and critical to the safety of crane operators: passing a written examination developed and validated in accordance with Joint Committee standards (discussed earlier) and the requirement that the certifying entity be accredited by NCCA. In addition, the ASA recommends that Section 5006.1(a)(1) be clarified with regard to the nature of the

physical examination that is required in terms of who is to conduct the examination and the nature of the exam.

Response:

The Board acknowledges the ASA's support for the proposal and as indicated in previous responses, the Board staff intends to modify the proposed language in Section 5006.1(a)(1) to clearly indicate the nature of the physical exam and who is to conduct it (see the response to Mr. Coenen's and Mr. Brent's comment letters).

The Board thanks Ms. Nelson for her comments and participation in the Board's rulemaking process.

Mr. Stephen P. Lyons, Executive Director, Crane Owners Association, by letter dated December 11, 2002.

Comment:

Mr. Lyons expressed his support for the proposed revisions to Section 5006 and new Section 5006.1 of the General Industry Safety Orders. Mr. Lyons stated the proposal will serve to improve the level of safety for operators of mobile and tower cranes in California. He stated further that by adopting the proposed amendments the Board will be recognizing the efforts of many in the industry who have implemented crane operator certification programs. He stated that approximately five years ago his organization's member contractors committed to validating the qualifications of their operators by having them certified by the NCCCO. He also stated that to date over 250 operators have gone through the NCCCO program successfully, a program which should comply with the proposal.

Mr. Lyons suggested moving forward the effective date of the proposal to January 1, 2004 to avoid any delay in the benefits of such a program to crane operators. Mr. Lyons indicated that the current date would unnecessarily delay the benefits of the proposed amendments. He concluded by stating that he supports the proposed changes which should include his proposed modification.

Response:

See the Board's response to Mr. Brent's comment with regard to the issue of the proposal's effective date.

The Board acknowledges Mr. Lyon's support of the proposed amendments and his participation in the Board's rulemaking process.

Mr. Anthony W. Mitchell, Ph.D., President, International Assessment Institute, by letter dated December 11, 2002.

Comment:

Mr. Mitchell stated that he supports the proposed amendments to Article 98, Section 5006 and new Section 5006.1. He summarized his experience and qualifications in the area of performance testing for the past 20 years. He also indicated that he participated in two of the advisory committees convened by Board staff. He indicated that he is pleased to see the language that the staff has proposed regarding crane operator qualifications and certification and stated further that the credibility of any requirement for crane operators to demonstrate their competence depends upon the quality and integrity of the examination program.

He summarized the essential elements of the proposal emphasizing the importance of test validation in accordance with Joint Committee standards and accreditation of certifying entities by the NCCA.

He concluded by again restating his support for the proposal and urged the Board to adopt them.

Response:

The Board acknowledges Mr. Mitchell's support for the proposed language and his participation in the advisory committee and Board's rulemaking process.

Mr. Joel M. Dandrea, Executive Vice President, Specialized Carriers & Rigging Association, by letter dated December 12, 2002.

Comment:

Mr. Dandrea gave a brief description of his company, an international organization representing more than 1,100 member companies in 43 countries around the world. He stated that his members design, manufacture, own, rent, and or operate cranes on a daily basis and are comprised of both union and non union members.

Mr. Dandrea stated that his organization is in general agreement with the proposed amendments and stressed two points that should not be overlooked: 1) The written examination must be developed, validated and administered in accordance with Joint Committee standards and 2) certifying entities must have their programs accredited by the NCCA.

Mr. Dandrea closed by stating that application of Joint Committee standards and NCCA accreditation will guarantee the testing quality necessary for the intent of the proposal to be fulfilled.

Response:

The Board notes that the proposed language requires both NCCA accreditation and tests developed in accordance with the Joint Committee standards. The Board thanks Mr. Dandrea for his comment and participation in the Board's rulemaking process.

Ms. Lyn Berman, CIH, CSP, Sempra Energy Utilities, by letter dated December 12, 2002.

Comment:

Ms. Berman gave a brief description of her company, a Fortune 500 organization with nearly 12,000 employees who provide a wide spectrum of value-added electric, natural gas, broadband, and related products and services to a diverse range of customers.

With regard to Section 5006.1 Exception (2), Ms. Berman states that the reference to "electric line trucks (derrick trucks)..." may be misleading and cause confusion. The Article 2700 definition of "electric line trucks" does not include "derrick trucks" and derricks defined elsewhere in Title 8 does not include electric line trucks. Ms. Berman recommends deleting the term "derrick trucks" as it is misleading terminology.

Response:

The Board agrees with Ms. Berman and notes that staff has proposed to modify Exception No. 2 to delete the term "derrick trucks."

The Board would like to thank Ms. Berman for her comments and participation in the Board's rulemaking process.

Ms. Lyn Berman, CIH, CSP, Sempra Energy Utilities, by letter dated December 23, 2002.

Comment:

In the second of two separate comment letters to the Board, Ms. Berman gave a brief description of Sempra Energy Utilities, Inc. and stated that she appreciated the Board leaving the record open following the December 12, 2002 Public Hearing. Extending the comment period allowed Sempra Energy Utilities, Inc. to check on its potential involvement in the crane operator certification process in the event the current 15,000-pound cut-off, below which cranes would not be subject to the proposed Section 5006.1 requirements, was modified (lowered) to 7,500 pounds. She stated that her company currently operates 30 to 40 mobile cranes attached to working trucks which have a rated lifting capacity of approximately 8000 pounds. Ms. Berman stated it would be a costly effort for the gas utilities in the State to certify all employees at cost of \$500-\$600/operator. Therefore, Sempra Energy Utilities recommends that if the proposed

Exception No. 1 is modified, it be modified to exclude mobile cranes having a boom length of less than 25 feet or a maximum rated lifting capacity of less than 8,500 pounds.

Response:

The Board does not intend to modify proposed Exception No. 1 to Section 5006.1 to reduce the proposed lifting capacity. Accident statistics provided through the Division point towards the larger mobile cranes, those of 15,000 pounds rated lifting capacity or greater, as those involved in most of the catastrophic crane accidents where serious employee injury and property damage have occurred. Setting a lower trigger lifting capacity would have the effect of including more mobile cranes that would be subject to the requirements of Section 5006.1 and this would have the effect of increasing the proposal's cost impact upon the regulated public. The Board has not been presented with any documentation or evidence that would support a finding that lowering the current 15,000-pound cut-off is necessary to prevent catastrophic mobile crane accidents and given the added adverse economic impact of such action, it does not appear to be justified. Consequently, the Board would like to address Ms. Berman's concern by stating that it does not believe modification of proposed Exception No. 1 to lower the current 15,000-pound cut-off is necessary.

The Board would like to thank Ms. Berman for her continued interest in this matter and her participation in the Board's rulemaking process.

Mr. Jules W. Weaver, Chapter Manager, NECA, by letter dated December 20, 2002.

Comment:

Mr. Weaver explained that Western Line Constructors Chapter, Inc. is a chapter of the National Electrical Contractors Association and represents contractors who perform work for electrical utilities and other electrical customers throughout the western United States. He indicated that the proposal will have a significant impact on employers who perform work for public and non public utilities, municipalities, oil fields, etc. Based on his review of the proposal, Mr. Weaver made three suggestions:

1. Amend the Exception to Section 5006.1, Item 2 to read: *Operators of Electric line trucks (derrick trucks) as defined in Section 2700 of the Electrical Safety Orders.* Eliminating the words, "...used by public utilities..." would allow NECA employers the same exception that is given to public utilities for the same work that is being done by public utilities and contracted out to NECA employers that utilize the same qualified employees to operate electric line trucks. This would also benefit non-public utilities, refineries and others.
2. As for Exception to Section 5006.1, Item 1, Mr. Weaver asked that the weight not be dropped down to 7,500 pounds, as this will impact far too many pieces of equipment with significant adverse economic impact. More time should be given to study boom length and maximum rated lifting capacity.

3. Extend the public comment period and have an additional public meeting to discuss the proposed changes.

Response:

The Board concurs with Mr. Weaver's request to modify Exception No. 2 to new Section 5006.1 as proposed in his written comment letter in order to give private as well as public utility contractors the same exception on the basis that they perform the same type of work using the same type of equipment. The Board believes there is no good reason not to afford private electric utility contractors the same exception with regard to the use of electric line trucks (also known as digger derrick trucks), which are already regulated to some degree by Section 2940.7 of the High Voltage Electrical Safety Orders. Therefore, the Board has modified Exception No. 2 to delete wording relating to public utility companies.

With regard to Mr. Weaver's second comment, the Board does not intend at this time to lower the proposed maximum rated lifting capacity cut off for mobile cranes. (See also the Board's response to Ms. Berman's written comment dated December 23, 2002).

With regard to Mr. Weaver's third comment, at the December 12, 2002 Public Hearing, the Board Chairman was asked by a representative from the power generation industry to extend the comment period to allow utility companies an opportunity to review and discuss the proposal internally and provide written comments. The Board Chairman agreed and extended the public comment period two weeks to December 26, 2002. Board staff embarked on this project beginning in the third quarter of 1998 and convened several advisory committees beginning in May of 2000 which included representatives from public and private utility companies, crane experts and the construction industry in general. The Board believes that the 45-day notice, which preceded the December 12, 2002 Public Hearing, and the extension of the public comment period two full weeks to December 26, 2002 has provided ample time and opportunity for the public and private utility industry to consider the proposal and provide comments. The Board also notes that the proposal has received general support by the industry. Consequently, the Board does not believe further extension of the public comment is necessary.

The Board would like to thank Mr. Weaver for his comments and participation in the rulemaking process.

Mr. Richard Dunkin, Assistant Business Manager, International Brotherhood of Electrical Workers (IBEW), Local 1245, by letter dated December 23, 2002.

Comment:

Mr. Dunkin stated that Local 1245 understands and supports crane operator certification and has been generally supportive of Cal-OSHA in their endeavors for a great many years and will continue to do so in the future. Mr. Dunkin thanked the Board for holding

open the public comment period. Mr. Dunkin indicated some suggested modifications to the proposal as follows:

- Modify Exception No. 1 to read: “ Mobile Cranes having a boom length of less than 80 feet or a maximum rated lifting capacity of less than 50 tons. Mr. Dunkin indicated that the electrical line industry uses this type of equipment in the erection and assembly of transmission tower lines.
- With regard to Exception No. 2, Mr. Dunkin proposed the following language: “All operators of Electric Line Trucks (derrick trucks) used to perform overhead and underground electrical construction and maintenance and as defined in Section 2700 of the Electrical Safety Orders.” Mr. Dunkin indicated that the IBEW’s approved joint lineman apprentice training programs cover the operation of line trucks, load capabilities and load limits in classroom as well as five years of on the job training (OJT). The line truck is used daily in the electrical line industry.
- Extend the public comment period and have an additional meeting to discuss the proposed changes.

Response:

The first suggested modification as worded (“...boom length of less than 80 feet or a maximum rated....”) would exempt a very large number of mobile cranes in California from the proposed crane operator certification requirement. Based on the accident statistics provided by the Division and testimony from advisory committee members from the public and private sectors, such a cut-off as suggested here, would leave a substantial number of California mobile crane operators at greater risk of experiencing an accident or fatality. The Board believes this is not justified. The suggested modification would essentially “water down” the intended effect of the proposed language to levels that would still leave a large population of mobile cranes in California, not only in the electric power/utility industry, unaccounted for in terms of the qualifications of the operators. The Board does not see the efficacy of modifying the proposed exception as proposed by Mr. Dunkin. There will be a substantial reduction in the number of mobile cranes that really need to be covered by the proposed requirements and the Board can find no justification at this time for such a modification.

With regard to Mr. Dunkin’s second bulleted comment, the Board has modified the proposed Exception No. 2 to read: “(2) Operators of electric line trucks as defined in Section 2700 of the Electrical Safety Orders and regulated by Section 2940.7 of the High Voltage Electrical Safety Orders.” As modified the proposal would clearly indicate to the employer that the highly specialized electric line trucks whether used by private and public entities, including contractors, are excluded from the proposed requirements of Section 5006.1. The Board recognizes the IBEW’s excellent apprentice training program which includes a combination of classroom and five years of OJT. Therefore, the Board believes no further modification of the proposed Exception No. 2 is warranted at this time.

As far as Mr. Dunkin's third comment is concerned, see the Board's response to Mr. Weaver's third comment also requesting an extension of the public comment period.

The Board thanks Mr. Dunkin for his comments and participation in the rulemaking process.

Mr. Patrick Lavin, Business Manager, IBEW, Local 47.

Comment:

Mr. Lavin stated that he is the business manager and financial secretary of IBEW Local 47 which represents approximately 5000 IBEW utility workers at California Edison and six municipal utilities throughout Southern California and Nevada and that he is also Chairman of the Coalition of California Utility Employees representing 40,000 utility employees throughout the state. Mr. Lavin stated that in his opinion, both public and private utilities should be part of proposed exclusion No. 2 to Section 5006.1 and that employees (IBEW and contractors) doing business on utility properties should be included in the proposed exclusion.

Response:

See the Board's response to Mr. Weaver's written comment regarding the proposed Exception No. 2 to Section 5006.1.

The Board thanks Mr. Lavin for his comment and participation in the Board's rulemaking process.

II. Oral Comments

Oral comments received at the December 12, 2002, Public Hearing.

Mr. Graham Brent, National Commission for the Certification of Crane Operators (NCCCO).

Comment:

Following a brief description of the NCCCO, Mr. Brent stated that he is in general agreement with the proposal and recommended the Board consider modifying the proposal further to address six specific issues as indicated below:

- Referencing the 1999 edition of the Joint Standards for Educational Psychological Tests.
- Referencing the ASME B30.3 Construction Tower Crane standard.
- References to specific chapters within the referenced ASME standards should be checked to ensure that they are germane to operator competency.
- Addressing the issue of revocation and suspension which is required under NCCA accreditation.
- Clarification of the physical examination requirements.
- Moving the effective date of the proposal forward to help prevent accidents.

Response:

The Board concurs with Mr. Brent with regard to the first, second, third and fifth bulleted items indicated above in his oral comment and has modified the proposal accordingly (See the Board's response to Mr. Brent's written comment letter with respect to the fifth item.). However, with regard to modifying the proposal to specifically address a revocation and suspension procedure, the Board notes that, according to the proposal, employers who choose to become a NCCA accredited certifying entity will have to meet the 2002 NCCA Standards for Accreditation of Certifying Programs (standards, effective January 1, 2003). Among the various standards is a requirement under Standard No. 6, Responsibilities of Stakeholders, which includes among the essential elements of an accredited certification program, a disciplinary program to discipline certificants whose actions are deemed to be harmful to the public or inappropriate to the trade, task, skill or discipline, in this case the safe operation of a tower or mobile crane. Such inappropriate behavior might include incompetence, unethical behavior, or physical or mental impairment affecting performance.

Consequently, the Board does not believe it is necessary to modify the proposal to stipulate a revocation/suspension procedure when it is already a prerequisite part of the certifying entity's certification program as stipulated by the NCCA accreditation standards.

With regard to moving the effective date of the proposal up, again see the Board's response to Mr. Brent's written comment letter. With regard to this issue the Board notes that NCCA accreditation process is not an overnight process. The NCCA standards require the accreditation applicant to have completed at least two examination administrations and provide examination score documentation along with the application for review by NCCA. The time involved to develop and administer tests for the employers of operators of mobile and/or tower cranes and have the accompanying

documentation reviewed by NCCA could take months. Employers who elect to become certifying entities for the first time will need time to comply with the requirements. Therefore, the Board believes that the June 1, 2005 effective date is entirely reasonable and should not be modified.

The Board would like to acknowledge and thank Mr. Brent for his participation in the Board's rulemaking process and for his interest in the safety of California crane operators.

Mr. Kevin Bland, representing Snyder Langston Builders

Comment:

Mr. Bland stated that he supports the proposal and indicated that it is invaluable to the safety of crane operators in California. He recommended modification to the following three areas concerning:

- Clarification of the physical requirements in light of what is required by the US DOT.
- Modifying the ASME reference to the B30.4 standard to include Chapter 4-3 which discusses crane safe operating procedures.
- Modifying Section 5006.1(a)(3)(D) to include a reference to ASME B30.3 which pertains to construction tower cranes.

Response:

The Board concurs with Mr. Bland and has modified the proposal as recommended by Mr. Bland. The Board thanks Mr. Bland for his comments and participation in the Board's rulemaking process.

Mr. Mark Burton, Operating Engineers, Local 3

Comment:

Mr. Burton stated that the Operating Engineers are committed to the certification of crane operators and proposed two modifications to the proposal:

- Reduce the minimum load capacity from 15,000 pounds to 7,500 pounds.
- move up the effective date from January 1, 2005 to January 1, 2004.

Response:

See the Board's response to Ms. Berman's written comment dated December 23, 2002 with regard to Section 5006.1, Exception No. 1. With regard to moving up the effective

date of the proposal, see the Board's response to Mr. Brent's oral comment expressed at the December 12, 2002 Public Hearing.

The Board thanks Mr. Burton for his comments and participation in the Board's rulemaking process.

Mr. Curtis Brooks, Director, Operating Engineers, Local 3.

Comment:

Mr. Brooks requested the term "trainee" in Section 5006.1(e) be changed to "apprentice" and that the minimum load capacity be changed from 15,000 pounds to 7,500 pounds.

Response:

See the Board's response to Ms. Berman's written comment dated December 23, 2003 with regard to the proposed 15,000-pound minimum load capacity specified in Section 5006.1, Exception No. 1. With regard to the issue of use of the term "apprentice" in lieu of "trainee", the Board believes that the term "trainee" which is existing language is more directly applicable to a wide variety of California employers than the term "apprentice" which, while it might be familiar to represented crane operators and their employers, would be confusing where non-represented crane operators would be working. A definition for "apprentice" is contained in Labor Code Section 3077 and specifies individuals who have entered in to a written apprenticeship agreement. This definition connotes a contractual relationship between an employer and a represented employee which would apply to only a specific number of places of employment affected by the proposal thereby excluding a significant number of workplaces where "apprentices" are not employed. In addition, the Board believes the existing term "trainee" encompasses "apprentices" and is therefore the better choice of terms. Consequently, the Board believes it is not necessary to modify the proposal to delete the term "trainee" in favor of "apprentice."

The Board thanks Mr. Brooks for his comments and participation in the Board's rulemaking process.

Mr. Bill Smith, Maxim Crane Works.

Comment:

Mr. Smith stated that his company fully supports the proposal and that studies have shown that crane operator certification will reduce the possibility for crane accidents and save lives. He also indicated that cost impact will be insignificant since many employers in California are already sending their employees out to be certified. Mr. Smith stated that he is pleased to see that California is taking a leadership position in this area of crane operation.

Response:

The Board acknowledges Mr. Smith's support for the proposal and appreciates his comment and participation in the Board's rulemaking process.

Mr. Ben Hoiland, Crane Certification Association of America.

Comment:

Mr. Hoiland stated that he fully supports the proposal and cited statistics by Federal OSHA which demonstrate that 25% of all workplace fatalities are crane related. Mr. Hoiland stated that the proposal is necessary to reduce the number of fatalities that occur related to crane operation. At nearly the conclusion of the Public Hearing Mr. Hoiland made a second statement following the last oral comment by Board member Art Murray to the effect that certain cranes, because of the type of crane it is and the nature of the work they perform, are exempt from being certified. Mr. Hoiland stated that he recommends not tying crane operator certification and crane certification together.

Response:

The Board acknowledges Mr. Hoiland's support for the proposal and his participation in the Board's rulemaking process. With regard to Mr. Hoiland's closing comment regarding crane certification vs. crane operator certification, the proposal is very clear to the extent that it specifically applies to the certification of the actual crane operator and not to certification of the crane by a certified crane inspector as contained in Articles 99 and 100 of the GISO. The Board agrees that the proposal should not be tied together with crane certification and finds that this proposal and the Crane Operational Testing and Inspection and Maintenance requirements which utilize the services of a certified agent/qualified inspector are sufficiently distinct and separate from each other so as to not cause any confusion.

The Board thanks Mr. Hoiland for his comments and participation in the Board's rulemaking process.

Mr. Michael Vlaming, Crane Owners Association, Inc.

Comment:

Mr. Vlaming stated that his association fully supports the Board staff's proposal and suggested that the effective date be moved up to January 1, 2004.

Response:

With regard to the issue of the proposal's effective date, see the Board's response to Mr. Brent's oral comment. The Board thanks Mr. Vlaming for his comments and participation in the Board's rulemaking process.

Ms. Marti Stroup, Associated General Contractors (AGC) of California.

Comment:

Ms. Stroup stated that the AGC California supports the proposal and suggested Board staff clarify the physical examination requirement to include criteria to ensure that the operator is medically and physically fit to operate the equipment.

Response:

The Board concurs with Ms. Stroup and proposes to modify the proposal to clarify the requirement for a physical examination by specifying that it be conducted by a physician in accordance with criteria contained in the ASME B30.5-2000 standard or those of the US DOT.

The Board thanks Ms. Stroup for her comments and participation in the Board's rulemaking process.

Mr. Todd Bloomstine, Southern California Contractors Association and the Mobile Crane Operators Group.

Comment:

Mr. Bloomstine expressed his support for the proposal and stated he looks forward to its adoption.

Response:

The Board thanks Mr. Bloomstine for his comment and participation in the Board's rulemaking process.

Mr. Steve Rank, District Council of Ironworkers and Western Steel Council

Comment:

Mr. Rank expressed his support for the proposal.

Response:

The Board thanks Mr. Rank for his comment and participation in the Board's rulemaking process.

Mr. Tim Cremins, Operating Engineers for Cal-Nevada Conference.

Comment:

Mr. Cremins stated that he would like to see the physical exam requirements mirror the DOT standards that are used in industry now and are widely practiced. He also recommended that the reference to the term "trainee" be deleted and replaced with the term "apprentice."

Response:

The Board does agree with Mr. Cremins to the extent that additional clarity to the physical examination requirements is necessary to ensure that employers understand the examination criteria. See the response to Mr. Coenen's comment letter. With regard to the issue of use of the term "apprentice" in lieu of "trainee," see the Board's response to the oral comment by Mr. Brooks.

The Board would like to thank Mr. Cremins for his comments and participation in the Board's rulemaking process.

Ms. Lyn Berman, Sempra Energy Utilities.

Comment:

Ms. Berman stated that she supports the proposal and indicated that the term "derrick trucks" as used in Exception No. 2 of Section 5006.1 should be modified (deleted) as it is not a defined term in Title 8. Ms. Berman also stated that she would like to see the minimum rated capacity cutoff weight in pounds contained in Exception No. 1 remain unchanged as a lowering down to 7,500 pounds would result in significant adverse economic impact for her company. She requested an extension to the comment period to examine the proposal further and submit additional written comments.

Response:

The Board concurs with Ms. Berman's comment regarding the term "derrick trucks" and proposes to delete it from the proposal. In addition for reasons previously discussed in responses to written comments from Ms. Berman. The Board has no intention of modifying the 15,000-pound maximum rated load figure given in Exception No. 1.

The Board thanks Ms. Berman for her comments and participation in the Board's rulemaking process.

Mr. Bill Jackson, Safety Director, Granite Construction.

Comment:

Mr. Jackson suggested clarifying the physical examination requirement to tell employers what they need to do and asked why the 15,000-pound maximum lifting capacity figure was selected for Exception No. 1 and suggested annual certification of operators. Mr. Jackson also stated that he does not believe that testing/certification entities will emerge in the California marketplace as a result of the proposal. He indicated that he believes this because the proposal does not specify what it takes for an entity to become certified and to do so takes a great deal of money, time and effort. Since NCCCO already exists there are not likely to be significant numbers of employers who will opt to be their own certifying entity.

Response:

The Board agrees with Mr. Jackson with regard to clarification of the physical examination requirement in Section 5006.1. Please see the response to Mr. Coenen's comment letter. As for the 15,000-pound cut-off or trigger for Exception No. 1, see the Board's response to Ms. Berman's written comment. The Board staff in considering the cost impact of the proposal recognized that the statewide cost impact of the proposal was directly related to the number of mobile and tower cranes covered by the proposal as well as the certification frequency. Annual certification will result in more costs for the employer, which staff does not believe are justified at this point in time. No credible evidence has been presented to Board staff to support annual certification of operators. Consequently, until such time as there is evidence demonstrating the need for reducing the currently proposed five-year certification, the Board does not believe modifying the proposal is necessary.

With regard to Mr. Jackson's belief that the NCCCO will not be joined by other entities to provide certification services, the Board believes that there is no apparent reason to believe they won't. The Board believes it is reasonable to conclude that it may be advantageous for California employers to have a marketplace that offers some choice in certification providers. The NCCCO is already accredited by NCCA to administer mobile crane testing in California and is currently developing tower crane examinations. The Board believes that this does not rule out the possibility that others may join NCCCO to provide such services in California, nor does it rule out the possibility that a number of California employers will choose to become their own certifying entity.

The Board would like to thank Mr. Jackson for his comments and participation in the Board's rulemaking process.

Mr. Art Pulaski, California Labor Federation.

Comment:

Mr. Pulaski urged the Board to adopt the proposal.

Response:

The Board thanks Mr. Pulaski for his comment and support of the proposal.

Mr. Art Murray, California Occupational Safety and Health Standards Board Member.

Comment:

Mr. Murray made a number of comments at the hearing and began by stating that he is not a proponent of substance abuse testing. He asked Board staff whether there are any existing Title 8 regulations that mandate substance abuse testing. He then stated that if physical examinations are required they should take into account or recognize US DOT physical examination requirements. He questioned the wisdom in giving consideration to use of the term "apprentice" in lieu of the term "trainee." He clarified his point further by stating that in the utility industry a person may never be an apprentice but could be a trainee. Mr. Murray stated that there is a need for staff to be very careful with the terminology. Finally, Mr. Murray asked if the exemption for public utilities would include subcontractors/contractors working on utility property under the HVESO or LVESO.

Response:

There are no specific Title 8 requirements that mandate substance abuse (drug) testing. However, the Shipbuilding, Ship Repairing and Ship Breaking Safety Orders, Code of Safe Practices includes a rule 18, which states that no one shall knowingly be permitted or required to work while the employee's ability or alertness is so impaired (as it would be while under the influence of alcohol or drugs) by fatigue, illness, or other causes that it might unnecessarily expose the employee or others to injury. The Tunnel Safety Orders in Section 8410(e) prohibit any person to use or possess any intoxicating liquors or drugs at any place of employment where these safety orders apply. Furthermore, this regulation states that when any person is known or suspected of being under the influence of an intoxicating liquor or drugs, he/she shall not be permitted to enter or remain on the job site. Section 1550(b) of the Construction Safety Orders, Competency and Qualifications of Blasters states that the employer shall ensure that the physical condition of the licensed blaster will not interfere with his or her ability to safely conduct blasting operations. Also, Board staff notes that Government Code (GC) Sections 8350-8357 require that any

person or organization awarded a contract or a grant for the procurement of any property or services from a state agency shall certify to the contracting or granting agency that it will provide a drug free workplace as defined in GC Section 8351(a).

Given the above, substance abuse in the workplace is a condition that both Title 8 and the GC have no tolerance for. While the GC and Title 8 do not require the employer to implement a substance abuse testing program, in order to comply with the performance oriented language of the GC and Title 8, the employer would likely have to implement some type of substance abuse testing program to verify that the blaster, tunneling employee, or shipyard worker was in fact unimpaired and able to perform his/her duties safely. Employers who provide the state with services must ensure that as contractors they maintain a zero tolerance on drugs and alcohol in their workplace. Lastly, the ASME B 30 mobile and tower crane standards require substance abuse testing in addition to a physical examination as part of the crane operator's qualifications. The Board believes that a substance abuse testing requirement as proposed is both valid and essential to ensure the safe operation of tower and mobile cranes. The bottom line: the proposal is meaningless if the operator is under the influence of drugs and/or alcohol when operating the crane.

With respect to the physical examination requirement, the Board has proposed to modify the proposal to specify that the physical examination is to be conducted by a physician and follow either the specific criteria called for in the ASME B 30.4 standard or those of the US DOT. With regard to the exemption of private as well as public entities from the requirements of proposed Section 5006.1, see the response to Mr. Weaver's written comment. The Board proposes to modify Exception No. 2 to delete language applying the exception to only public entities thereby exempting private and public entities engaged in work involving the use of electric line trucks as defined in Section 2700 of the High Voltage Electrical Safety Orders. As proposed, the requirements of Section 5006.1 would not apply to subcontractors/contractors working on utility property covered by the HVESO or Low Voltage Electrical Safety Orders (LVESO). (See also the Board's response to Mr. Dunkin's written comment.)

ADDITIONAL DOCUMENT(S) RELIED UPON

1. American Society of Mechanical Engineers (ASME), B 30.3-1996 (Revision of ANSI/ASME B30.3-1990), Standard for Construction Tower Cranes, Chapter 3-3.
2. American Society of Mechanical Engineers (ASME), B-30.4-1996, (Revision of ASME B30.4-1990), Portal, Tower, and Pedestal Cranes, Chapter 4-3.
3. U.S. Department of Transportation, Federal Motor Carrier Safety Administration, Sections 391.41 through 391.49.

These documents are available for review Monday through Friday from 8:00 to 4:30 at the Standards Board Office located at 2520 Venture Oaks Drive, Suite 350, Sacramento, California.

DETERMINATION OF MANDATE

These regulations do not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

The Board invited interested persons to present statements or arguments with respect to alternatives to the proposed regulation. No alternative considered by the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the adopted action.